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ABSTRACT

This paper describes a pilot mentoring/tutoring program which paired undergraduate and graduate students with homeless, at-risk, urban elementary students. The project addressed students' poor school performance and disparities in access to technology for minority and disadvantaged students. It purchased computer software and established a computer lab. Tutors provided weekly computer sessions and individualized attention in order to influence tutees' attitudes toward math, reading, and science and improve academic achievement. To improve the consistency of support networks for students, parents and teachers were involved. The goal for college students was to increase knowledge of assessment issues and techniques, practice using tests, write and implement individualized remediation outcomes based on tutee needs, write psychoeducational evaluations, and collaborate to design a Webquest project. Elementary students completed various assessments at the beginning of the project and were compared to their peers. Parents received a final progress report showing individualized program gains and recommendations for future instruction. Reports were forwarded to classroom teachers. Tutees made between 3- and 8-month gains toward grade equivalency. Though students made greater academic gains in reading, greater attitude change was made toward math. There was no difference according to tutee age or gender. (SM)

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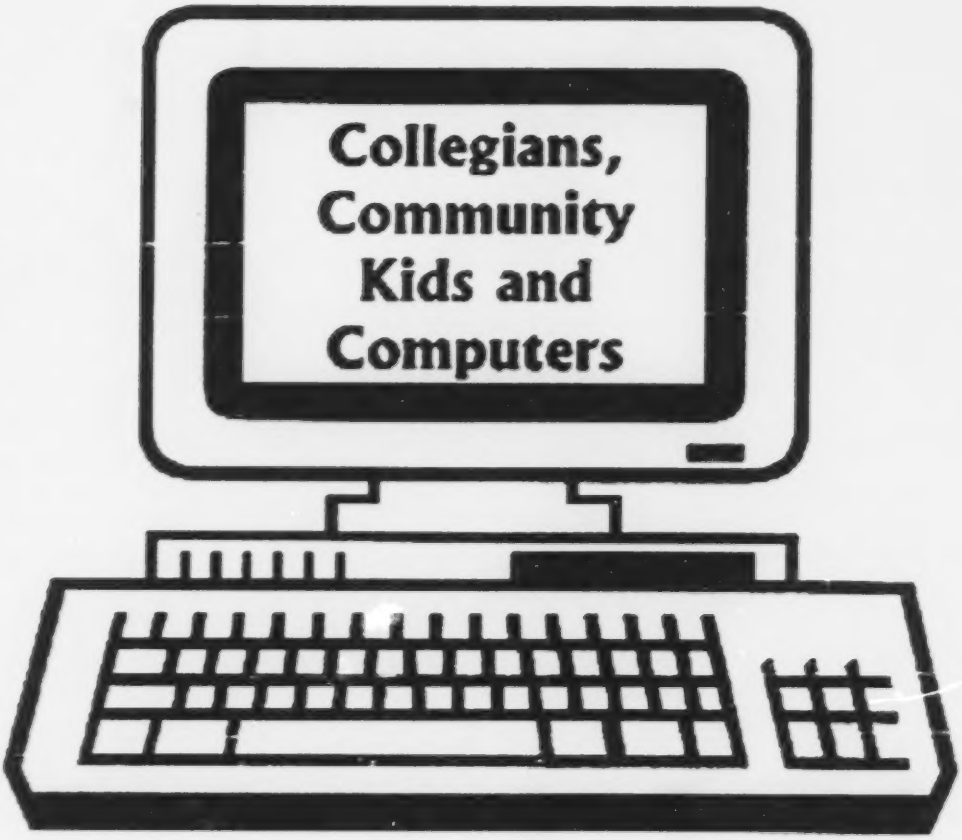

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Content

This pilot project was developed to provide a mentoring/tutoring program which paired upper level college and graduate students with homeless elementary school students from an at-risk community school district in New York City. The school district had shown a need for intensive remediation from results of a standardized test that ranked them as one of the poorest performing school districts. The project also provided a unique opportunity to address the glaring disparity in access to technology for minority and economically disadvantaged children as previously reported in research (Ysseldyke, Algozzine & Thunlow, 1992; Lindsay, 1997). It was called "Collegians, Community Kids, and Computers".

Besides providing outreach initiatives between the college and surrounding urban community, the hope was to incorporate technology into assessment and instruction to facilitate the achievement of higher academic standards and to establish an educational environment that promoted positive attitudes toward learning. Research on the use of technology in education has shown a positive impact on instruction (MacArthur, 1988; Bryant & Dix, 1999; Johnson & Bender, 1999). Research has also shown that attitudes toward what children study in school may very well be more crucial to their futures than the knowledge accumulated (Cramer, 1975; Levine, 1984; Anderson-Inman, Knox-Quinn & Horney, 1996).

This project further examined the impact that technology has on assessment, remediation and attitude change of at-risk students. It also provided an excellent opportunity for students in two programs, Special Education and Counseling, to practice collaborative and consultation skills. Upper level college and graduate students taking counseling, assessment and remediation courses were paired with 25 at-risk students from a homeless shelter in the Bronx. The students got transportation by bus to the college once a week for two semesters (assessment in Fall, 1999 and remediation in Spring 2000) in order to attend a structured assessment/remediation clinic with the infusion of technology to facilitate the testing and teaching process. The student "tutees" ranged in age from 5 to 12 years old, and attended kindergarten through seventh grade at local public schools. There were 10 boys and 15 girls who attended this project. All had been reported by their classroom teachers as having learning difficulties either for math and/or reading, and 3 tutees had previously been held back a grade due to lack of educational progress. The college/graduate students were responsible for implementing the project under the supervision of the course instructor and a computer consultant. Counseling students were responsible for an intake and two consultation sessions with the Special Education students. In addition, two attendants from the homeless shelter and a social worker from the school district helped with the provision of snack and personal needs of the tutees after school. The students and tutees spent an hour working together for 12 weeks each semester, and then the tutees went home, at which point the students had another hour of coursework and discussion.

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Project Goals

The infusion of technology goal was accomplished by purchasing software and setting up a classroom/computer lab. The hope was that through the use of weekly computer sessions, coupled with one-to-one attention, tutee attitudes toward learning would change, particularly in the three areas examined: math, reading and science. In addition to attitude change, the hope was that reading and math scores would also improve by the end of the project and the target criteria was 3 months growth toward the grade equivalent.

The outcomes of the college courses were to increase knowledge of assessment issues and techniques as measured by a written exam, practice using the actual tests, write and implement individualized remediation outcomes based on tutee needs, write a psychoeducational evaluation, and to collaborate as a group to design a Webquest project to be used with a group of tutees. The Counseling students had to consult and collaborate with a Special Education student and his or her tutee, and write a consultation report.

Another goal of the project was to improve the consistency of the support network surrounding the at-risk child, so both parent and classroom teacher components were built in. Parents attended the first and last sessions of each of the two courses, met with their child's tutor, provided background information and discussed their concerns. At the end of each course, the parents were also invited back to receive progress reports and evaluations of their children.

The classroom teacher was contacted initially to complete a preliminary checklist detailing what strengths and weaknesses the child presented at school, which was shared with the college student . At the end of each course, parents were encouraged to share their child's final evaluation reports and recommendations for future planning of instruction with their child's classroom teacher. College/graduate students were also encouraged to visit their tutee's classroom, schedules permitting.

The first course in September was the college assessment class. The process consisted of giving the tutee an interest inventory to help build communication and bonding between the student-tutee dyad. It proved to be an enjoyable and relaxing way for each individual to learn about the other. The Piers-Harris Self-Esteem Test and Estes Attitude Scale Toward Learning were given to obtain baseline scores for the next year. Next, in conjunction with the course outline for the semester, various reading and math assessments were given, which varied a bit depending on the age and functioning level of the child. Most students used the Key Math Diagnostic Test, the Qualitative Reading Inventory II, the Slosson Oral Reading Test-Revised, the computerized Star Assessment for Reading and Math, and the Phonological Awareness Test. Four students chose to use the Brigance Diagnostic Inventory of Elementary Skills and the Peabody Individualized Achievement Test. This test battery was chosen because of its ability to pinpoint different areas of performance for later remediation. Math performance was looked at in terms of Basic Concepts, Computations and Applications. Reading performance consisted of

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Vocabulary, Word Attack Skills and Comprehension. Tutees were compared to their age and grade equivalents. The college students practiced scoring and interpreting the results on each other before the tests were administered to the tutees. The college students also wrote up final psychoeducational evaluations at the end of the course and shared these with the parents at a mid-year conference party.

The Spring remediation class brought a few changes due to typical attritional occurrences, such as changing residences and logistical difficulties. However, the returning tutees and college students were happy and excited to see each other again and renew their relationship for the one hour, once a week sessions. At this time, college students used their assessment results from last semester to plan an individualized remediation program for their tutees, which again focused on the three areas of math, reading and science. The college students were responsible for writing three weekly lesson plans, actively engaging their tutees with instruction and evaluating the performance for that day. As a reward for hard work, and to support the instructional environment, tutees were able to use educational software from the following list of choices: Reading Blaster (ages 6-9), Reading Blaster 2000, Word Blaster, Reading Rabbit 1, Math Rock, Kids Work Deluxe, Kids Pix, Phonics 4 Kids, and the Magic Schoolbus (Animals, Rainforest, Solar System, Dinosaurs, Inside the Earth, Bugs and Ocean).

Mid-semester, the college students were divided into groups of five according to the age and functioning level of their tutees, and were assigned a science-based Webquest to prepare and implement with their tutees during the final two sessions. A consultant instructed the students on how to develop a Webquest and review already existing ones from the Internet. Topics chosen by the students were: Dinosaurs, The Solar System, Butterflies and Endangered Species.

Results

At the end of the project a final progress report was given to the parents at a meeting/awards ceremony. These reports consisted of individualized program gains in reading and math and future recommendations for instruction. The reports were forwarded to the tutees' classroom teachers. Tutees made between 3 and 8 month gains toward grade equivalency as indicated by the Slosson Oral Reading Test-R and the Star Assessments for Reading and Math. The average monthly gain across tutees was 4 months for the area of reading and 3 months for the area of math. For younger students (ages 5 and 6) who were not testable by the formalized assessments, informal letter and number symbol, letter/sound and numerical/quantity recognition tests were used. Results showed a 30% average score improvement from February until May. In addition, a re-administration of the Estes Attitude Scale Toward Learning was given, and positive attitude changes were indicated for the desired areas of reading, math and science. The average gains in the factor analytic indicators showing positive change (difference scores) for all students were: 7 questions out of 14 in math (50%), 3 questions out of 14 in reading (21%) and 2 questions out of 14 in science (14%). There was no difference related to age or gender of the tutee, which was consistent with the interpretation of the test as indicated in the manual. It was interesting that although greater academic monthly

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gains were made in reading, greater attitude change was made toward math, although the results were not significantly different.

Other indicators of success were tutee printouts, letters and drawings, stating how much they enjoyed the experience with the college students and computers, and how much they hoped that they could return the next year. Parents also verbally stated that they were pleased with the project. Those that moved out of the homeless shelter requested that their child continue the program, but sometimes this was not feasible due to logistics or travel time. Overall, the results exceeded expectations for success. The final awards ceremony/party was a very happy yet tearful one.

The pilot project demonstrated how academic advances and attitude change can be fostered through the introduction of computer technology to the assessment/ remediation process of education of at-risk children. It documented how the college community could successfully outreach to community children, schools and families. It also showed the many benefits of collaboration between the two disciplines of Special Education and Counseling. Next year further study will look into the consistency of results over time, and providing more services to parents.

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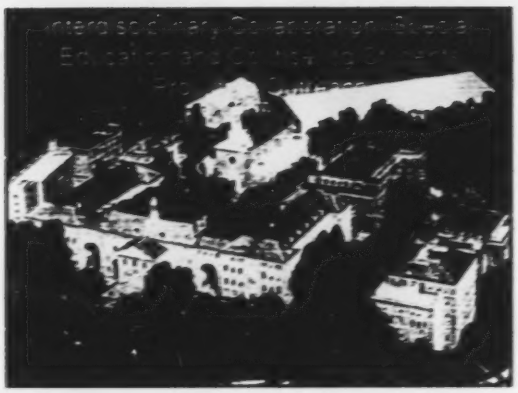

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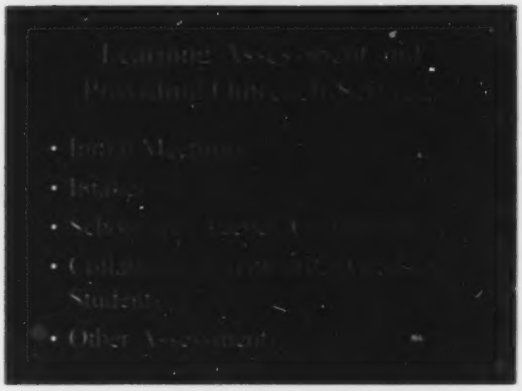

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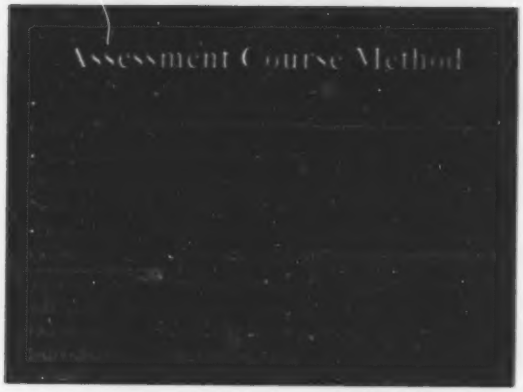

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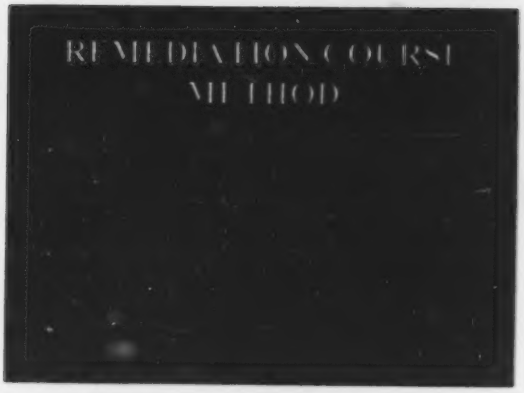

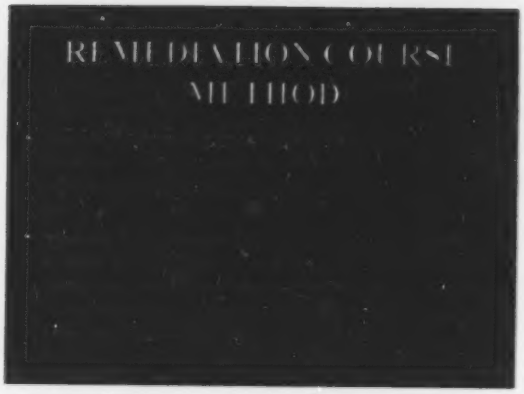

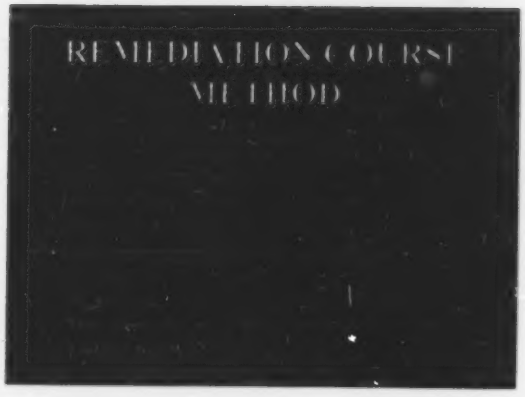

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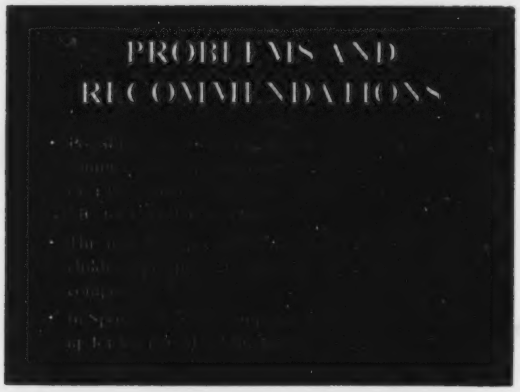

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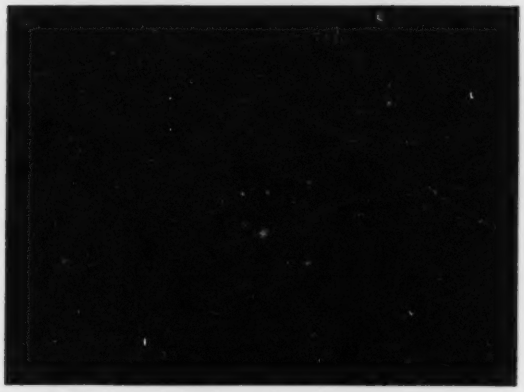

Name: _____

HISTORY

1. Name of student:

_____ _____ _____
First Last Middle

2. Sex: M_____ F_____

3. Age: _____

4. D.O.B. _____ _____ _____
Month Day Year

5. Home Address: _____

_____

6. Home Phone: (____) _____-_____

7. School Name: _____

8. School Address: _____

_____

9. Date child began school: ____/____/ ____

10. Has child attended other schools previously? Yes ____ No____

11. Current Grade: _____

12. Is the child repeating the grade? Yes ____ No____

13. If Yes, what is the reason for being held back? _____

_____

14. Class Orientation: Monolingual ___ Bilingual___ Intervention ___ Special Ed.___

15. Reason for referral:_____

_____

_____

16. Child's first language: _____ 17. Language spoken at home:_____

18. If first language is different, when did child begin to verbally communicate in English?_____

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Name: _____

FAMILY COMPOSITION:

*Married( ) *Single parent ( ) *Divorced ( ) *Remarried ( ) *Deceased parent ( )

19. Mother's name: _____

20. Mother's Place of Birth _____

21. Father's name: _____

22. Father's Place of Birth: _____

23. Is mother employed? Yes____ No____

24. Does the mother work outside of the home? Yes____ No____

25. Type of occupation: _____

26. Is the father employed? Yes____ No____

27. Does the father work outside of the home? Yes____ No____

28. Type of occupation: _____

29. Family members who reside in the home:

* Parents: Mother: _____ Father: _____

* Siblings: sisters: _____ brothers: _____

* Grandparents: _____

* Other relatives: _____

* Pets: _____

30. Who cares for the child when parents are absent? _____

31. Does the child go to school on his/her own? Yes___ No___

32. If the answer is No, who takes the child to school? _____

33. Does the child go home alone after school? Yes ___ No ___

34. If the answer is No, who picks the child up from school?_____

35. Is there someone at home, when child arrives from school? Yes _____ No_____

36. Who? _____

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Name: _____

HOUSEHOLD SETTING

In what room of your home do you do your homework? _____

What type of furniture is in that room? _____

_____

Is there a television set in that room? Yes ___ No ___

Does anyone else use that room? Yes ___ No___

What for? _____

Draw a picture of yourself in this room.

SLEEPING ARRANGEMENTS

Do you sleep in your own room? Yes ____ No____

Who do share your room with? _____

Do you share your bed or have separate beds? _____

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Name: _____

INTERPRETATION OF LEARNING ENVIRONMENT

1. What do you like best about school? _____

_____

2. What don't you like about school? _____

_____

3. What is your favorite subject? _____

4. What is the first thing you do when you get home from school? _____

_____

5. What are activities you like to do when you are not in school? _____

_____

6. Who do you do these activities with? _____

7. Who are your friends? _____

_____

8. What games do you like to play? _____

_____

9. When you grow up, what do you want to be? _____

10. How much do you enjoy reading? Very much ( ) Not much ( ) Not at all ( )

11. How much do you enjoy writing? Very much ( ) Not much ( ) Not at all ( )

12. Complete the statements on the next page:

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Name: _____

Things I like about myself:

*
*
*
*
*
*

Things I would like to change about myself:

*
*
*
*
*
*

These are things that make me happy:

*
*
*
*
*
*

These are things that make me sad:

*
*
*
*
*
*

These are things that make me angry:

*
*
*
*
*
*

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